


<b>FORM PTO-1449</b> US Department of 61730 U.S. PTO Commerce Patent and  02/20/97 <b>INFORMATION DISCLOSURE          STATEMENT BY APPLICANT</b>	<b>ATTY DOCKET NO.</b> P41 90273	<b>SERIAL NO.</b> 08/704,467
	<b>APPLICANT</b> Gallagher et al.	
	<b>FILING DATE</b> 08/28/96	<b>GROUP</b> 1511

**U.S. PATENT DOCUMENTS**

EXAM. INITIALS	DOCUMENT NUMBER	DATE	NAME	CLASS	SUB- CLASS	FILING DATE
mk	5,376,403	12/27/94	Capote et al.	427	96	10/1/91
mk	5,463,190	10/31/95	Carson et al.	174	259	4/4/94

**FOREIGN PATENT DOCUMENTS**


EXAM. INITIALS	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB- CLASS	TRANSLATION (YES/NO)
	NONE					

**OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages)**

mk	—	Gallagher et al., ABSTRACT "Transient Liquid Phase Sintering Conductive Adhesives" 568-573 (1995)
----	---	---

**AND NO OTHERS**

RECEIVED  
 MAR 6 1997  
 GROUP 1300

<b>EXAMINER</b> 	<b>DATE CONSIDERED</b> 10/1/97
--	-----------------------------------

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

LIST OF PATENTS AND PUBLICATIONS FOR  
APPLICANT'S INFORMATION DISCLOSURE  
STATEMENTAPPLICANT  
Capote et al.

(USE SEVERAL SHEETS IF NECESSARY)

FILING DATE  
10/17/94GROUP  
Unknown

## REFERENCE DESIGNATION

## U.S. PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS IF APPROPRIATE	FILING DATE
<i>mk</i>	AA	2,993,815	7/25/61	TREPTOW	117	212	
	AB	3,256,109	6/14/66	BERGER	117	38	
	AC	3,410,714	11/12/68	JONES	117	46	
	AD	3,679,439	7/25/72	MILGRAM	252	514	
	AE	3,681,135	8/1/72	GRAHAM	106	1	
	AF	3,714,709	2/6/73	LIEDERBACH	29	626	
	AG	3,791,027	2/12/74	ANGELO et al.	148	23	
	AH	3,800,020	3/26/74	PARFET	264	104	
	AI	3,801,364	4/2/74	KOJINA et al.	117	212	
	AJ	3,808,046	4/30/74	DAVEY	252	512	
<i>mk</i>	AK	3,857,798	12/31/74	WALL et al.	252	514	

## FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION YES NO
<i>mk</i>	AL	134,737	3/24/60	USSR			X
	AM	237,840	7/30/86	GERMANY			X
	AN	239,901	32387	EPO			
	AO	261,868	11/9/88	GERMANY			X
<i>mk</i>	AP	1,190,736	7/23/85	CANADA			

## OTHER ART (INCLUDING AUTHOR, TITLE, DATE, PERTINENT PAGES, ETC.)

*mk* AR Feeley, Berbst & Schmeckenbecher, Conductive Pastes, IBM Technical Disclosure Bulletin, 12/68*mk* AS "Electricity-Carrying Ink Used in Circuit Boards" Wall Street Journal (9/28/88)*mk* AT "Prototype Tool Turns Out Multilevel Circuit Boards" Electronic Design (5/25/89)

EXAMINER

*Muh Ky*

DATE CONSIDERED

10/1/97

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

LIST OF PATENTS AND PUBLICATIONS FOR  
APPLICANT'S INFORMATION DISCLOSURE  
STATEMENTAPPLICANT  
Capote et al.

(USE SEVERAL SHEETS IF NECESSARY)

FILING DATE  
10/17/94GROUP  
Unknown

## REFERENCE DESIGNATION

## U.S. PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS IF APPROPRIATE	FILING DATE
<i>mk</i>	AA <sup>2</sup>	3,904,555	9/9/75	MATSUDA et al.	252	514	
<i>↑</i>	AB <sup>2</sup>	3,960,777	6/1/76	COYLE	252	514	
	AC <sup>2</sup>	3,983,075	9/28/76	MARSHALL et al.	252	511	
	AD <sup>2</sup>	4,000,016	12/28/76	LAZZARINI et al.	148	23	
	AE <sup>2</sup>	4,001,146	1/4/77	HOROWITZ	252	514	
	AF <sup>2</sup>	4,127,699	11/28/78	AUMILLER et al.	428	461	
	AG <sup>2</sup>	4,147,669	4/3/79	SHAHEEN et al.	252	512	
	AH <sup>2</sup>	4,186,036	1/29/80	ELMS et al.	427	386	
	AI <sup>2</sup>	4,233,103	11/11/80	SHAHEEN	156	331	
<i>↓</i>	AJ <sup>2</sup>	4,273,593	6/16/81	MASTRANGELO	148	24	
<i>mk</i>	AK <sup>2</sup>	4,278,702	7/14/81	JENQ	427	96	

## FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION YES NO
<i>mk</i>	AL <sup>2</sup>	1,455,513	2/12/74	GREAT BRITAIN			
<i>mk</i>	AM <sup>2</sup>	2,054,277	6/27/80	GREAT BRITAIN			
<i>mk</i>	AN <sup>2</sup>	49-97,846	8/17/74	JAPAN			X
<i>mk</i>	AO <sup>2</sup>	50-100,596	8/9/75	JAPAN			X
<i>mk</i>	AP <sup>2</sup>	53-33,389	3/29/78	JAPAN			X

## OTHER ART (INCLUDING AUTHOR, TITLE, DATE, PERTINENT PAGES, ETC.)

AR<sup>2</sup>AS<sup>2</sup>AT<sup>2</sup>

EXAMINER

*Mark K...*

DATE CONSIDERED

10/1/97

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

LIST OF PATENTS AND PUBLICATIONS FOR  
APPLICANT'S INFORMATION DISCLOSURE  
STATEMENTAPPLICANT  
Capote et al.

(USE SEVERAL SHEETS IF NECESSARY)

FILING DATE  
10/17/94GROUP  
Unknown

## REFERENCE DESIGNATION

## U.S. PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS IF APPROPRIATE	FILING DATE
<i>mk</i>	AA <sup>3</sup>	4,293,451	10/6/81	ROSS	252	512	
	AB <sup>3</sup>	4,327,124	4/27/82	DESMARAIS, JR.	427	96	
	AC <sup>3</sup>	4,352,899	10/5/82	TADA et al.	523	451	
	AD <sup>3</sup>	4,353,816	10/12/82	IWASA	252	512	
	AE <sup>3</sup>	4,368,281	1/11/83	BRUMMETT et al.	523	458	
	AF <sup>3</sup>	4,396,666	8/2/83	ERNSBERGER	428	208	
	AG <sup>3</sup>	4,400,214	8/23/83	OGAWA et al.	252	512	
	AH <sup>3</sup>	4,415,486	11/15/83	BOONSTRA et al.	252	514	
	AI <sup>3</sup>	4,429,657	2/7/84	DESMARAIS, JR.	118	114	
	AJ <sup>3</sup>	4,457,861	7/3/84	DESMARAIS, JR.	252	514	
<i>mk</i>	AK <sup>3</sup>	4,459,166	7/10/84	DIETZ et al.	156	89	

## FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION YES NO
<i>mk</i>	AL <sup>3</sup>	53-133,799	11/21/78	JAPAN			
<i>mk</i>	AM <sup>3</sup>	54-24,811	2/24/79	JAPAN			X
<i>mk</i>	AN <sup>3</sup>	56-32,605	4/2/81	JAPAN			X
<i>mk</i>	AO <sup>3</sup>	57-113,505	7/15/82	JAPAN			
<i>mk</i>	AP <sup>3</sup>	57-208,002	12/21/82	JAPAN			X

## OTHER ART (INCLUDING AUTHOR, TITLE, DATE, PERTINENT PAGES, ETC.)

AR<sup>3</sup>AS<sup>3</sup>AT<sup>3</sup>

EXAMINER

*Math Kq*

DATE CONSIDERED

10/1/97

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

LIST OF PATENTS AND PUBLICATIONS FOR  
APPLICANT'S INFORMATION DISCLOSURE  
STATEMENTAPPLICANT  
Capote et al.

(USE SEVERAL SHEETS IF NECESSARY)

FILING DATE  
10/17/94GROUP  
Unknown

## REFERENCE DESIGNATION

## U.S. PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
<i>mk</i>	AA <sup>4</sup>	4,496,475	11/29/85	ABRAMS	252	514	
	AB <sup>4</sup>	4,533,685	8/6/85	HUDGIN et al.	523	457	
	AC <sup>4</sup>	4,557,857	12/10/85	SORENSEN	252	503	
	AD <sup>4</sup>	4,564,563	1/14/86	MARTIN et al.	252	511	
	AE <sup>4</sup>	4,575,432	3/11/86	LIN et al.	428	456	
	AF <sup>4</sup>	4,578,425	3/25/86	SANTORELLI	525	109	
	AG <sup>4</sup>	4,581,158	4/8/86	LIN	252	511	
	AH <sup>4</sup>	4,592,861	6/3/86	BEKELE et al.	252	511	
	AI <sup>4</sup>	4,639,396	1/27/87	SEMSARZADEH	428	373	
	AJ <sup>4</sup>	4,652,398	3/24/87	GOSWAMI et al.	252	514	
<i>mk</i>	AK <sup>4</sup>	4,673,532	6/16/87	BARAJAS et al.	252	512	

## FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION YES NO
<i>mk</i>	AL <sup>4</sup>	58-42,651	3/12/83	JAPAN	—	—	X
	AM <sup>4</sup>	58-61,144	4/12/83	JAPAN	—	—	X
	AN <sup>4</sup>	58-104,969	6/22/83	JAPAN	—	—	X
	AO <sup>4</sup>	58-127,742	7/29/83	JAPAN	—	—	X
<i>mk</i>	AP <sup>4</sup>	59-49,272	3/21/84	JAPAN	—	—	X

## OTHER ART (INCLUDING AUTHOR, TITLE, DATE, PERTINENT PAGES, ETC.)

AR<sup>4</sup>AS<sup>4</sup>AT<sup>4</sup>

EXAMINER

*Mark Kyr*

DATE CONSIDERED

10/1/97

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

ATTY. DOCKET NO.  
5026-101D1SERIAL NO.  
08/324,060LIST OF PATENTS AND PUBLICATIONS FOR  
APPLICANT'S INFORMATION DISCLOSURE  
STATEMENTAPPLICANT  
Capote et al.

(USE SEVERAL SHEETS IF NECESSARY)

FILING DATE  
10/17/94GROUP  
Unknown

## REFERENCE DESIGNATION

## U.S. PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS IF APPROPRIATE
<i>mk</i>	AA <sup>S</sup>	4,678,602	7/7/87	TANAKA et al.	252	513
↑	AB <sup>S</sup>	4,680,141	7/14/87	BARAJAS	252	512
	AC <sup>S</sup>	4,683,653	8/4/87	IWASA	29	830
	AD <sup>S</sup>	4,696,764	9/29/87	YAMAZAKI	252	503
	AE <sup>S</sup>	4,705,647	11/10/87	YAMAGUCHI et al.	252	512
	AF <sup>S</sup>	4,731,130	3/15/88	O'LEARY	148	24
	AG <sup>S</sup>	4,732,702	3/22/88	YAMAZAKI et al.	252	512
	AH <sup>S</sup>	4,733,018	3/22/88	PRABHU et al.	174	68.5
	AI <sup>S</sup>	4,740,252	4/26/88	HASAGAWA et al.	148	24
↓	AJ <sup>S</sup>	4,756,756	7/12/88	CASSAT	106	20
<i>mk</i>	AK <sup>S</sup>	4,765,929	8/23/88	SHAFFER	252	511

## FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION YES NO
<i>mk</i>	AL <sup>S</sup>	59-100,176	6/9/84	JAPAN	—	—	X
↑	AM <sup>S</sup>	59-166,542	9/19/84	JAPAN	—	—	X
	AN <sup>S</sup>	60-149,670	8/7/85	JAPAN	—	—	X
↓	AO <sup>S</sup>	60-243,171	12/3/85	JAPAN	—	—	X
<i>mk</i>	AP <sup>S</sup>	60-245,742	12/5/85	JAPAN	—	—	X

## OTHER ART (INCLUDING AUTHOR, TITLE, DATE, PERTINENT PAGES, ETC.)

AR<sup>S</sup>AS<sup>S</sup>AT<sup>S</sup>

EXAMINER

*Mark Kz*

DATE CONSIDERED

10/1/97

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

LIST OF PATENTS AND PUBLICATIONS FOR  
APPLICANT'S INFORMATION DISCLOSURE  
STATEMENTAPPLICANT  
Capote et al.

(USE SEVERAL SHEETS IF NECESSARY)

FILING DATE  
10/17/94GROUP  
Unknown

## REFERENCE DESIGNATION

## U.S. PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
<i>MK</i>	AA <sup>6</sup>	4,775,500	10/4/88	FUNAKOSHI et al.	264	22	
	AB <sup>6</sup>	4,780,371	10/25/88	JOSEPH et al.	523	457	
	AC <sup>6</sup>	4,786,437	11/22/88	EHRREICH	252	506	
	AD <sup>6</sup>	4,789,411	12/6/88	EGUCHI et al.	148	24	
	AE <sup>6</sup>	4,803,543	2/7/89	INAYOSHI et al.	357	72	
	AF <sup>6</sup>	4,808,434	2/28/89	BENNETT et al.	427	96	
	AG <sup>6</sup>	4,816,184	3/28/89	FUKUDA et al.	252	511	
	AH <sup>6</sup>	4,820,446	4/11/89	PRUD'HOMME	252	511	
	AI <sup>6</sup>	4,830,779	5/16/89	MAENO et al.	252	512	
	AJ <sup>6</sup>	4,836,955	6/6/89	EHRREICH	252	512	
<i>MK</i>	AK <sup>6</sup>	4,859,268	8/22/89	JOSEPH et al.	156	275.5	

## FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION YES NO
<i>MK</i>	AL <sup>6</sup>	61-57,660	3/24/86	JAPAN	—	—	X
	AM <sup>6</sup>	61-261,375	11/19/86	JAPAN	—	—	X
	AN <sup>6</sup>	61-287,974	12/18/86	JAPAN	—	—	X
	AO <sup>6</sup>	62-156,176	7/11/87	JAPAN	—	—	X
<i>MK</i>	AP <sup>6</sup>	62-160,603	7/16/87	JAPAN	—	—	X

## OTHER ART (INCLUDING AUTHOR, TITLE, DATE, PERTINENT PAGES, ETC.)

AR<sup>6</sup>AS<sup>6</sup>AT<sup>6</sup>

EXAMINER

*Mark K.*

DATE CONSIDERED

10/1/97

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

LIST OF PATENTS AND PUBLICATIONS FOR  
APPLICANT'S INFORMATION DISCLOSURE  
STATEMENTAPPLICANT  
Capote et al.

(USE SEVERAL SHEETS IF NECESSARY)

FILING DATE  
10/17/94GROUP  
Unknown

## REFERENCE DESIGNATION

## U.S. PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS IF APPROPRIATE	FILING DATE
<i>mk</i>	AA <sup>7</sup>	4,872,928	10/10/89	JACOBS	148	24	
	AB <sup>7</sup>	4,874,548	10/17/89	HAJOVSKY	252	511	
	AC <sup>7</sup>	4,880,570	11/14/89	SANBORN et al.	252	512	
	AD <sup>7</sup>	4,882,227	11/21/89	IWASE et al.	428	407	
	AE <sup>7</sup>	4,888,135	12/19/89	TSUNAGA et al.	252	512	
	AF <sup>7</sup>	4,894,184	1/16/90	FUKUOKA et al.	252	512	
	AG <sup>7</sup>	4,940,498	7/10/90	RUBIN	148	23	
	AH <sup>7</sup>	4,971,727	11/20/90	TAKAHASHI et al.	252	511	
	AI <sup>7</sup>	4,996,005	2/26/91	SAITO et al.	252	512	
<i>mk</i>	AJ <sup>7</sup>	3,502,609	3/24/70	BARIE et al.	260	37	
	AK <sup>7</sup>						

## FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION YES NO
<i>mk</i>	AL <sup>7</sup>	63-39,947	2/20/88	JAPAN	—	—	X
	AM <sup>7</sup>	63-81,185	4/12/88	JAPAN	—	—	X
	AN <sup>7</sup>	63-125,582	5/28/88	JAPAN	—	—	X
	AO <sup>7</sup>	63-223,072	9/16/88	JAPAN	—	—	X
<i>mk</i>	AP <sup>7</sup>	63-235,369	9/30/88	JAPAN	—	—	X

## OTHER ART (INCLUDING AUTHOR, TITLE, DATE, PERTINENT PAGES, ETC.)

AR<sup>7</sup>AS<sup>7</sup>AT<sup>7</sup>

EXAMINER

*Mark Kyn*

DATE CONSIDERED

10/1/97

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.



ATTY. DOCKET NO.  
5026-101 D1SERIAL NO.  
08/324,060LIST OF PATENTS AND PUBLICATIONS FOR  
APPLICANT'S INFORMATION DISCLOSURE  
STATEMENTAPPLICANT  
Capote et al.

(USE SEVERAL SHEETS IF NECESSARY)

FILING DATE  
10/17/94GROUP  
Unknown

## REFERENCE DESIGNATION

## U.S. PATENT DOCUMENTS

EXAMINER  
INITIAL

DOCUMENT NUMBER

DATE

NAME

CLASS

SUBCLASS

FILING DATE  
IF APPROPRIATEAA<sup>8</sup>AB<sup>8</sup>AC<sup>8</sup>AD<sup>8</sup>AE<sup>8</sup>AF<sup>8</sup>AG<sup>8</sup>AH<sup>8</sup>AI<sup>8</sup>AJ<sup>8</sup>AK<sup>8</sup>

## FOREIGN PATENT DOCUMENTS

DOCUMENT NUMBER

DATE

COUNTRY

CLASS

SUBCLASS

TRANSLATION  
YES NO

<i>mk</i>	AL <sup>8</sup>	63-277,279	11/15/88	JAPAN	—	—	X
<i>mk</i>	AM <sup>8</sup>	63-298,908	12/6/88	JAPAN	—	—	X
<i>mk</i>	AN <sup>8</sup>	63-301,405	12/8/88	JAPAN	—	—	X
<i>mk</i>	AO <sup>8</sup>	64-81,866	3/28/89	JAPAN	—	—	X
<i>mk</i>	AP <sup>8</sup>	1-204,966	8/17/89	JAPAN	—	—	X

## OTHER ART (INCLUDING AUTHOR, TITLE, DATE, PERTINENT PAGES, ETC.)

AR<sup>8</sup>AS<sup>8</sup>AT<sup>8</sup>

EXAMINER

*Mal Ky*

DATE CONSIDERED

*10/1/97*

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

LIST OF PATENTS AND PUBLICATIONS FOR  
APPLICANT'S INFORMATION DISCLOSURE  
STATEMENT

(USE SEVERAL SHEETS IF NECESSARY)

APPLICANT  
Capote et al.FILING DATE  
10/17/94

GROUP

REFERENCE DESIGNATION

U.S. PATENT DOCUMENTS

EXAMINER  
INITIAL

DOCUMENT NUMBER

DATE

NAME

CLASS

SUBCLASS IF APPROPRIATE

FILING DATE

AA<sup>9</sup>AB<sup>9</sup>AC<sup>9</sup>AD<sup>9</sup>AE<sup>9</sup>AF<sup>9</sup>AG<sup>9</sup>AH<sup>9</sup>AI<sup>9</sup>AJ<sup>9</sup>AK<sup>9</sup>

## FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION YES NO
<i>mk</i>	AL <sup>9</sup>	1-132,652	5/25/89	JAPAN	—	—	X
<i>mk</i>	AM <sup>9</sup>	2-66,802	3/6/90	JAPAN	—	—	X
<i>mk</i>	AN <sup>9</sup>	2-66,803	3/6/90	JAPAN	—	—	X
<i>mk</i>	AO <sup>9</sup>	55-160,072	12/12/80	JAPAN	—	—	X
<i>mk</i>	AP <sup>9</sup>	WO 89/11209	11/16/89	PCT	—	—	

OTHER ART (INCLUDING AUTHOR, TITLE, DATE, PERTINENT PAGES, ETC.)

AR<sup>9</sup>AS<sup>9</sup>AT<sup>9</sup>

EXAMINER

*Mal Kgn*

DATE CONSIDERED

10/1/97

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.